

MINNESOTA ECONOMIC

TRENDS

BUSINESS EMPLOYMENT DYNAMICS

THE BACKSTORY TO
UNDERSTANDING JOB FLOWS



MARCH 2019

m EMPLOYMENT AND
ECONOMIC DEVELOPMENT



Communities on the Move

National projects aside, economic development professionals agree that Business Retention and Expansion – BRE – is the most practical strategy for growth. Cameron Macht, DEED Labor Market Information Office, and Michael Darger, University of Minnesota Extension, pair the Business Employment Dynamics dataset with ongoing projects that aim to keep businesses in the communities of Barnesville (Clay County, northwest Minnesota) and Cottage Grove (Washington County, metro area).

Both communities took different approaches: Barnesville enhanced its BRE visitation program, and sound community investments followed. In Cottage Grove, employer concerns about the workforce shortage led Park High School to launch a class, *How to Make Almost Anything*, in their new Inventor Space.

The program will build students' ability to prototype and make things with a variety of computer and production equipment, such as the Roland MDX-50 mill, valuable training for anyone who desires to work for area manufacturers.

Social Security. Earned Income Tax Credit benefits. Veterans' benefits. They're all examples of transfer payments, and the Bureau of Economic Analysis (U.S. Department of Commerce) produces transfer payments data as part of their personal income estimations. David Senf uses BEA estimates of personal income and its components, for states, counties, and metro areas, to compare economic well-being across areas and to track economic progress over time in *Where Does the Money Go?* This article tracks Minnesota's per capita personal income ranking over the last 20 years.

Sanjukta Chaudhuri and Carrie Marsh walk us through a new tool: The Bachelor's Degree and Career Destination (BDCD) tool. The BDCD provides information on occupations, employment and unemployment, labor force participation, and wage and salary incomes, and answers two questions: What occupations do undergraduate degree holders enter? What majors do incumbents of occupations come from? The tool was funded through a 2015 State Longitudinal Data Systems grant from the U.S. Department of Education.

The recent economic expansion in Minnesota has created better employment opportunities for high school graduates. In *College: Yes or No?* David Stokman, contributing writer and former intern with DEED Performance Management, examines trade-offs Minnesota high school graduates make in the life-changing decision of whether or not to go to college. Stokman examines statewide and regional trends for high school graduates who did not go to college but instead entered the workforce from 2009-2016.

Handwritten signature of Carol Walsh

Carol Walsh
Editor

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Enticing Businesses to Stay

Barnesville and Cottage Grove craft the local Business Retention and Expansion playbook.

When in Doubt, Pay Attention to Existing Business

Trying to attract businesses from outside the community or launching startup businesses often come to mind as key activities for economic development. However, economic development thought leaders generally agree that the most practical strategy for growth is keeping the businesses that are already established in the community. This activity is generally referred to as Business Retention and Expansion (BRE).¹ This article looks at results from DEED's Business Employment Dynamics dataset and provides insights and examples from real-life BRE projects from the University of Minnesota Extension's work with communities in a rural small town and a St. Paul suburb to illustrate BRE's relative importance. Both the data and stories demonstrate the value of paying attention to existing businesses.

Economic developers do many things to assist existing businesses because of the many valuable benefits these businesses provide to their communities including jobs, goods and services, property and other tax revenues, civic involvement, and more. If all of these activities related to helping local businesses can be classified as BRE work, then *BRE visitation* is a way for economic development organizations and communities to establish priorities.

For example, the U of M Extension's *Connecting Businesses and Community Program*² uses an intentional process in which communities organize individuals to visit local businesses to demonstrate appreciation and to survey them about their concerns and needs. The data are analyzed in order to respond both to individual business worries as well as to address systemic issues affecting the community's prospects for keeping and developing the

businesses. As noted, this article will use a few examples from the U of M Extension team's work around Minnesota, but there are other varied models and programs for BRE both in Minnesota and nationally.³ All of these BRE resources can help communities succeed in working with existing business and industry.

Welcoming New Jobs

Community and economic developers encourage and welcome new jobs from almost any source, whether it be business startups, relocations, or expansions of existing businesses. All these options are vital to a local economy, each contributing to the growth that developers want to see. New businesses often form to address a need that is not currently being met, while existing businesses often adapt to changing marketplace conditions to continue growing.

But after seeing the ribbon cutting at the grand opening or

¹"Business retention and expansion today" (2017). Community Development, 48:2, pp. 160-161. Retrieved from <https://z.umn.edu/BREtoday>

²"Retaining businesses in your community." University of Minnesota Extension. Retrieved from <http://z.umn.edu/BREhome>

³See Business Retention & Expansion International (<http://brei.org>), International Economic Development Council (<http://iedconline.org>), and Grow Minnesota! Partnership (<http://www.mnchamber.com/grow/grow-minnesota-partnership>)

the shovels throwing dirt at the publicly announced business expansion, it's often hard to quantify where job growth is actually coming from in a community. This prompts the question about which aspect of economic development is more important to focus on: attracting businesses from elsewhere, retention and expansion, or startups. DEED's Business Employment Dynamics (BED) program can help provide context to better understand these job flows.

From the statistical side, most employment analysis using data from DEED's Quarterly Census of Employment and Wages (QCEW) program only looks at net change – comparing the total number of jobs in one time period to the total number of jobs in another time period – to gauge progress. For example, there were an average of 2,853,897 jobs reported by employers in Minnesota in 2017, compared to 2,814,002 jobs in 2016, meaning that employers in the state added a net gain of 39,895 new jobs in the past year.

While that is useful for a big picture view of the economy, it doesn't tell the whole story. Behind that net job change, there was a tremendous amount of churn including job



gains and job losses, business expansions and contractions, and openings and closings. These are masked in the net change number from QCEW, but data from the BED program can help provide insights into these job fluctuations through a longitudinal history that links establishment records across quarters.⁴

Put simply, the BED statistics measure job changes at the establishment level by examining job flows at individual business

establishments. Though it does show job flows, it is important to understand that this is not a measure of turnover or movement of workers that are brought about by hires and separations. For example, if during a given quarter a worker leaves an establishment but another worker is hired at the same establishment, the employment levels would be unchanged over the reference period, and BED will show no job gain or job loss at this establishment. Instead, BED

⁴“About QCEW.” Minnesota Department of Employment & Economic Development. Retrieved from mn.gov/deed/data/data-tools/qcew/

is a measure of job gains or losses based on a count of total employment at an establishment in separate time periods. While this article focuses only on job gains from expansions and openings, BED data also show job losses due to contractions and closings. More detailed definitions below help explain how the program works:

Definitions for Business Employment Dynamics

- *Gross Job Gains* - The sum of all jobs added at either expanding or opening establishments.
- *Gross Job Losses* - The sum of all jobs lost at either contracting or closing establishments.
- *Expansions* - Establishments with positive third month employment in the current and previous quarters with a net increase in employment over the current quarter.
- *Openings* - Establishments with positive third month employment in the current quarter and zero employment in the previous quarter.
- *Contractions* - Establishments with positive third month employment in the current and previous quarters with a net decrease in employment in the current quarter.

- *Closings* - Establishments with positive third month employment in the previous quarter and zero employment in the current quarter.

The 70/30 Rule?

BED statistics are available on a quarterly and annual basis at the state, regional, county, and city levels, and by detailed industry, through DEED's online QCEW tool. In general, job gains from expansions accounted for about 72 percent of gross job gains on an annual basis, while the other 28 percent came from openings. During the strong recovery experienced this decade, expansions have averaged more than 75 percent of gross job gains, including a high of over 77 percent in three of the past five years (Figure 1).

In sum, BED data shows that the vast majority of job gains in Minnesota come from existing businesses, bolstering the focus on BRE. However, that does not diminish the importance of startups or relocations from out of state. In BED statistics, an establishment opening can only happen one time in a time period – once it has been opened, in the next quarter it would be considered an existing establishment, and therefore would be classified as expanding, contracting, or closing in subsequent quarters.

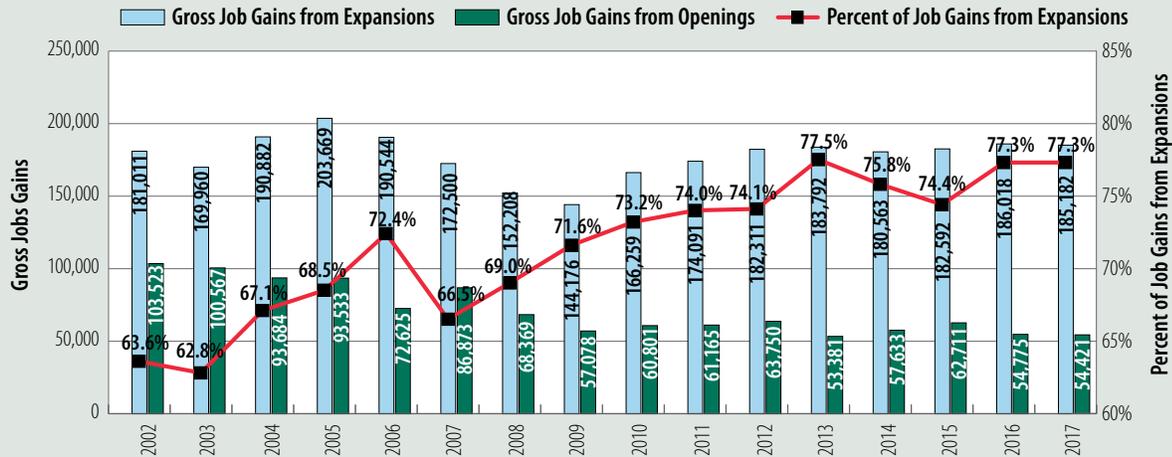
Interestingly, expanding businesses seem to be the wellspring of job growth during recovery periods and strong economic times, while startups become more important as a source of job gains during recessions. This is demonstrated by the relatively high percentages of job gains from expansions in recent years, compared to a higher reliance on job gains from openings between 2002 to 2004 and 2007 to 2009. Of course, job losses from contractions and closings are also much higher during the recessionary periods, though that is not shown in Figure 1 or included in this article.

Regional Significance

The percentage of jobs gained from expansions is mostly similar across the state, though there are some minor regional differences. Perhaps surprisingly, Southwest Minnesota actually had the highest dependence on job gains from expansions over time, while Northwest added the highest percentage from openings. The Twin Cities and Southeast Minnesota also tended to rely more on job gains from expansions, especially in recent years, whereas Central and Northeast enjoyed slightly more startup activity (Figure 2).

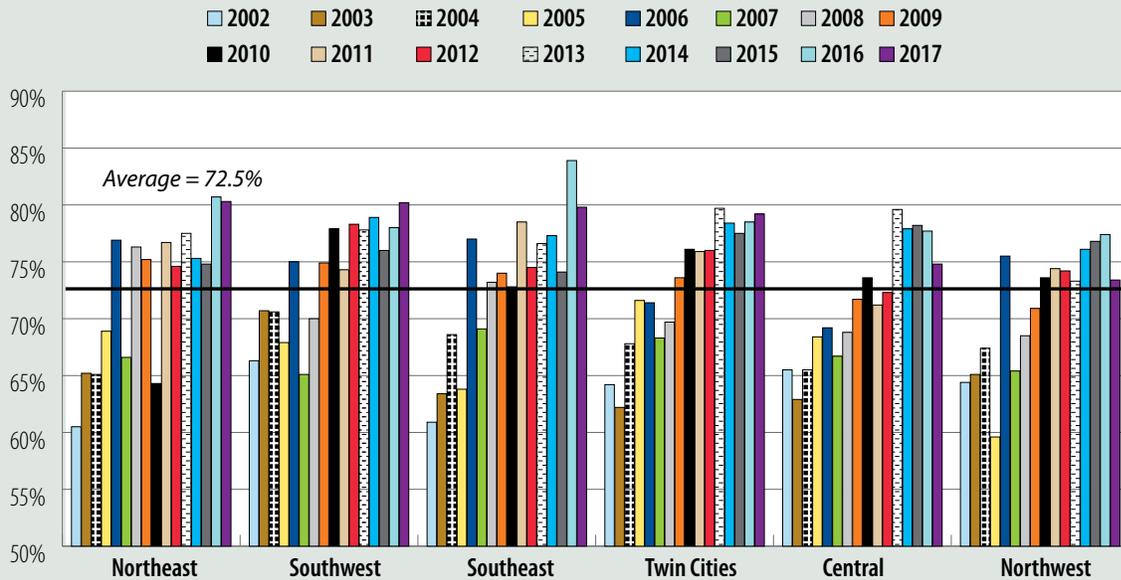
In any case and any location, BED data show that business

Figure 1. Gross Job Gains in Minnesota, 2002-2017



Source: DEED Quarterly Census of Employment and Wages, Business Employment Dynamics

Figure 2. Percentage of Gross Job Gains Coming from Expansions by Region, 2002-2017



Source: DEED Quarterly Census of Employment and Wages, Business Employment Dynamics

retention and expansion accounts for the majority of gross job gains in the economy. BED data show that jobs gained from openings also contribute significantly to economic growth, especially during recessionary periods, but never more than 40 percent of gross job gains. And of course, once those new businesses get started, economic developers often work to help them continue to grow in subsequent years.

individual businesses in any way it can in order to keep the business local – paving the way for additional investments in the community. In the *prioritize* phase surveys are compiled and the data reviewed by a multi-disciplinary group of economic developers, economists, DEED labor market information and business and community development professionals, U of M scholar-practitioners, and community task force members.

Barnesville, MN

Barnesville is a town near Fargo-Moorhead (pop. 2,600) that decided to go all in with its BRE visitation program. Forty-four community members conducted business visits in 2013, covering 69 of its 110 businesses. Over 90 percent of the jobs in the community were represented by the employers that were visited. Since then, many community investments have happened that were directly or indirectly influenced by the survey findings.

Here's an example of an indirect result of BRE visitation. The BRE survey indicated a strong interest among businesses in having natural gas service. Natural gas was not previously available in the community, but a natural gas provider had been considering providing service to Barnesville. Once they saw the survey findings indicating there would be a strong customer base from among local businesses, the company decided to invest in providing this form of energy in Barnesville.

In another finding, ten percent of firm owners said they were contemplating retirement, yet almost half (32) of the 69 businesses visited said they had no succession plan in place. In response, four succession planning workshops were

“The most practical strategy for growth is keeping established businesses in the community.”

The BRE Process

The U of M Extension model involves three big phases: 1. research, 2. prioritize and 3. implement (Figure 3). The result is a set of priority projects and directions to guide BRE efforts in the community. In the *research* phase a community will build a team and reach out to visit 30 to 60 or more businesses over a couple months. The team looks for opportunities to assist

The community's task force is then presented a customized report that includes strategies and potential project ideas pertinent to the needs of the visited businesses. This enables the task force to make priority decisions for BRE action. The process culminates in the *implement* phase, when the community will typically move three to five priority projects into action over the next few years.

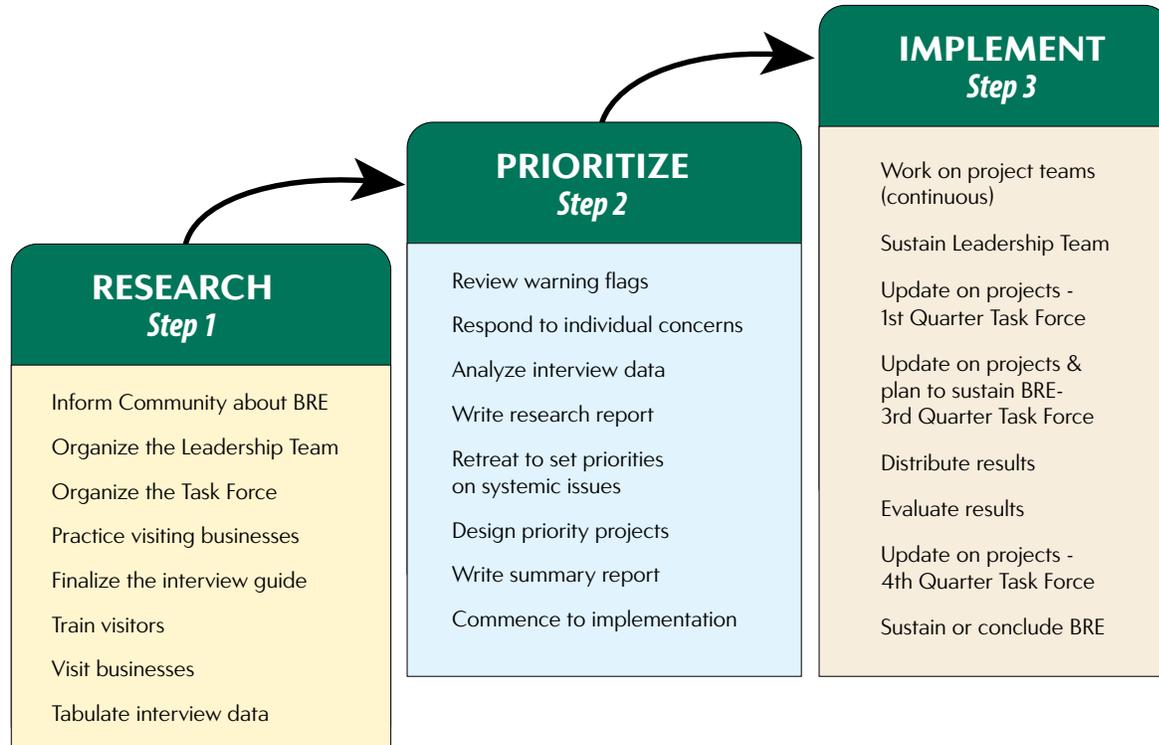
held and retiring business owners were connected with entrepreneurs interested in owning a business.⁵ The four sessions were well attended and, ultimately, they got the job done. Two key businesses transitioned to new ownership -- the Dairy Queen and Barnesville Drug and Hardware (a unique combination that exemplifies small town downtowns). Other businesses are still in the succession planning stages. Business succession is a particularly important priority for a rural community like Barnesville, since baby boomers still own

half, or more, of the businesses in rural America and they are retiring at high rates over the next several years. Once a rural business goes away, it is fairly unlikely it will be replaced by a new one. Barnesville helped the U of M Extension see how critical business transition is for rural communities, leading to the development of a new program to help communities with business succession.⁶

A company that Barnesville volunteers visited in 2013 is now a classic example of small town business retention and

expansion. Stoneridge Software started as a business in the owner's basement. Working with Karen Lauer of the Barnesville Economic Development Authority, Stoneridge moved into a commercial property as it expanded to six jobs. Two relocations and expansions later, Stoneridge has stayed in Barnesville and is now located in a newly restored historic building downtown. It has expanded to over 100 jobs nationally, with the biggest share of those positions (about 40 positions) located in Barnesville.

Figure 3. Business Retention and Expansion Flowchart



⁵Barnesville Business Retention and Expansion (BR&E) Strategies Program: Summary Report. pp. 8-13. Retrieved from <https://conservancy.umn.edu/handle/11299/171340>

⁶"Supporting rural business succession." University of Minnesota Extension. Retrieved from <https://z.umn.edu/BizSuccession>

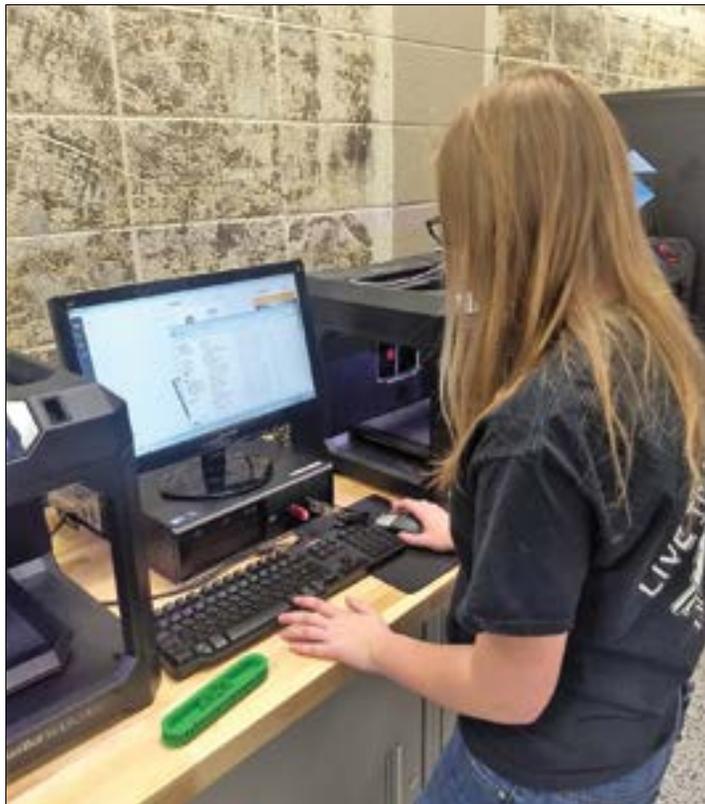


PHOTO CREDIT: BONNIE THOE-AUSTIN, INVENTOR SPACE/TECH ED TEACHER, PARK HIGH SCHOOL, COTTAGE GROVE

Cottage Grove, MN

In the Twin Cities metro area, the suburban city of Cottage Grove (pop. 36,000) visited 41 businesses during their program in 2017. Not surprisingly, workforce emerged as a leading concern for the businesses. In a tight labor market, workforce shortages were looming and have only tightened since then. Cottage Grove's employer mix includes large manufacturers and health care establishments that need skilled workers. Matt Wolf, economic development official for the city, said "Workforce was one of the most interesting things to come out of the BRE visits. It's also one of the most frustrating because everyone wants to stay in their own lane. For example, it's difficult to get businesses to interact with each other on these topics." Nevertheless, Wolf and county economic developer Chris Eng engaged with the South Washington County school district to explore workforce training programs to respond to the reported business needs.

The school district not only heard from the city and county about the need to build local capacity for workforce skills, they also heard directly from employers such as Renewal

by Andersen, a window manufacturer. The district's Park High School in Cottage Grove has a robust career and technical education (CTE) program. However, unlike communities with notable school-to-work programs, there isn't a technical college in Cottage Grove that businesses could easily partner with. To learn more about how to respond to business workforce concerns, Park High teachers and administrators reached out to other metro school districts such as Mahtomedi and Minnesota State campuses at Century College and St. Paul College.

This school year, Park High School launched its new class called *How to Make Almost Anything*⁷ in its new *Inventor Space*. With startup funding from local businesses and foundations (\$142,500), the program is available to all students including learners who don't plan to go to four-year colleges. As technology teacher Matt Maher explains, "The program will build students' ability to prototype and make things with a variety of computer and production equipment. This will be a valuable skill for anyone who desires to work for area manufacturers."

Assistant Principal Gretchen Romain said that the *Inventor Space* program offers valuable opportunities for Park High School students who tend to remain in their home district at higher rates in comparison to neighboring schools. "Our graduates have living wage manufacturing employment opportunities at all entry points along the continuum of education needed. At Park approximately 50 percent of our graduates go on to a four-year college, 33 percent to a community/technical college, and 17 percent go to work or the military." The school serves 1,900 students, including 30 percent on free and reduced price lunch. The school also has the highest percentage of English Language Learners (ELL) and homeless in the district.

The emerging program at Park High is a direct response to the identified need for workforce skills among area businesses. Though it is still a pilot program, the local economic developers and district officials have high hopes and big dreams, and the project clearly communicates to businesses that Cottage Grove cares about critical issues facing local businesses.

Moving Forward

So what's next for Barnesville and Cottage Grove for business retention and expansion? Based on the feedback they gathered from local businesses, the economic developers are now pretty sure they know what their priorities should be. Moreover, they've established a priority to stay in touch with businesses. Even though they "don't have the time", these economic developers plan to do more waves of BRE visits to keep connecting with business leaders. There is nothing like visiting business owners to find out exactly what's on their minds. When communities organize BRE visits in an intentional, systematic manner, they understand the priorities that are beneficial to their local economy, and tap into the strongest source of job gains. **■**

⁷This course title has its roots in MIT's outreach programming.

Where Does the Money Go?

Transfer payments are trending up in Minnesota due to an aging population and expanding programs.



Ever wonder where all the money goes now that the national debt has surpassed the \$22 trillion mark? Or where the increasing Social Security spending – projected in the mid-2030s to trigger reduced benefits unless Congress takes action to shore up the program’s finances – ends up? Where does the mounting Medicare and Medicaid money get spent? Or where Supplemental Nutrition Assistance Program (SNAP) benefits, Earned Income Tax Credit (EITC) benefits, or Veterans’ benefits are received and spent? Answers to questions like these can be found in current transfer payments data produced by the Bureau of Economic Analysis (BEA) as part of their personal income estimations.

BEA estimates of personal income and its components, for states, counties, and metro areas, are widely used to compare economic well-being across areas and to track economic progress over time. For example, Minnesota’s per capita personal income ranking over the last 20 years has ranged from a high of 11th in 2004 to 17th highest

in 2006. The state ranked 14th in per capita income in 2017 matching its average ranking between 1998 and 2017.

There are three main components of BEA’s personal income measure – earnings related to work, earnings received by individuals in the form of dividends, interest, and rents (DIR), and transfer payments. Transfer payments consist of a variety of payments to individuals and nonprofit institutions by federal, state, and local governments and by business. Unlike work-related earnings and DIR income, transfer payments are made with no current or future goods or services required in return. Table 1 lists the three personal income components for the U.S. and Minnesota along with their per capita estimates for 2017.

Minnesota’s personal income in 2017 was estimated at \$303.1 billion or 1.80 percent of total U.S. personal income of \$16.8 trillion. Minnesota earned 1.86 percent of the nation’s earnings from work and a slightly lower share, 1.74 percent of the nation’s

dividend, interest, and rent income. Minnesota received 1.66 percent of national transfer payments which was lower than the state's 1.71 percent of U.S. population. On a per capita basis, Minnesota's three major components of personal income combined ended up being 5.27 percent higher than U.S. per capita personal income, \$54,359 compared to \$51,640 in 2017. Minnesota per capita work earnings were 8.65 percent above the U.S., per capita dividends, interest, and rent earnings were 1.80 percent higher, while per capita transfer receipts were 3.23 percent less than the U.S. average (Table 1).

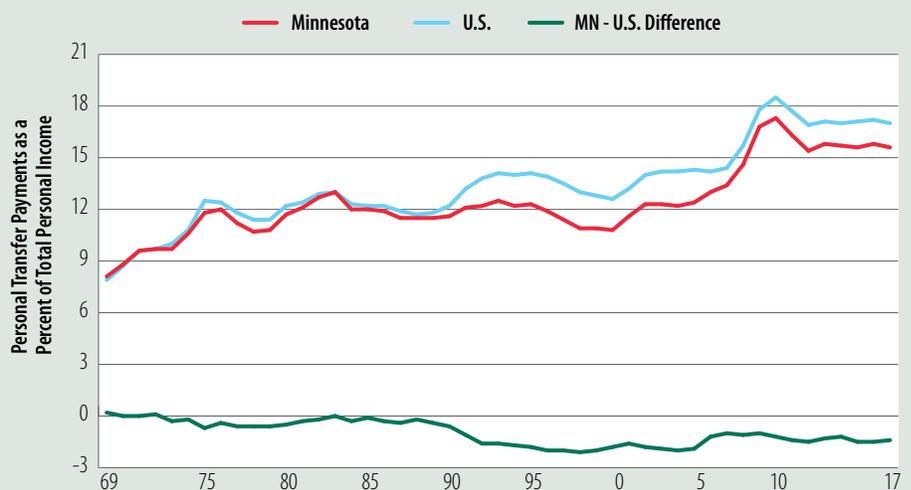
Transfer payments accounted for 15.6 percent of personal income in Minnesota in 2017 compared to 17.0 percent nationally. The 15.6 percent is down from a Minnesota high of 17.0 percent in 2010 (Figure 1). The recent drop in transfer payments as a percent of personal income repeats the usual cycle seen around recessions in Minnesota and nationally. When the economy stalls, growth in wages and salaries stalls or declines, while some transfer payments programs which are designed to be automatic stabilizers (increase when a recession hits and decrease when recovery starts), kick in.

Table 1. Personal Income Major Components, 2017

Total	U.S.	MN	Minnesota Percent of U.S.
Personal income (billions)	16,820.3	303.1	1.80
Net earnings by place of residence	10,603.7	197.3	1.86
Dividends, interest, and rent	3,356.9	58.5	1.74
Personal current transfer receipts	2,859.6	47.4	1.66
Population (millions)	325.7	5.6	1.71
Per Capita			
Personal income	51,640	54,359	5.27
Net earnings by place of residence	32,555	35,372	8.65
Dividends, interest, and rent	10,306	10,492	1.80
Personal current transfer receipts	8,779	8,496	-3.23

Source: Bureau of Economic Analysis (BEA) - <https://apps.bea.gov/itable/itable.cfm?ReqID=70&step=1>.

Figure 1. Personal Transfer Payments as a Percent of Total Personal Income



Source: Bureau of Economic Analysis (BEA) - <https://apps.bea.gov/itable/itable.cfm?ReqID=70&step=1>

Many programs comprising transfer payments are means-tested programs where qualifying for benefits depends on income level. Medicaid, Temporary Assistance for Needy Families (TANF), Pell Grants, and Earned Income Tax Credits (EITC) are means-tested transfer payments. Two of the three largest transfer payments, however, are not means-tested but age-tested. The two transfer payments, Social Security and Medicaid, accounted for 55.7 and 56.7 percent of all current personal transfer payments in 2017 in Minnesota and the U.S., respectively.

The Minnesota Personal Current Transfer Payments table lists the 16 types of transfer payment groups that the BEA compiles annually. The four smallest transfer payments listed by the BEA have been combined into an All Other category for this article. The Payment Descriptions column provides insight into the variety of benefits included in transfer payments. Some transfer payments are received directly by recipients as cash, like Social Security benefits, EITC payments, workers' compensation or unemployment insurance benefits. Other transfer payments are paid directly to providers of goods and services received by individuals. Payments that health care providers receive

from Medicare and Medicaid are obvious examples.

Figure 1 shows the upward drift of transfer payments as a source of personal income as measured by the BEA over the last two decades. The aging of the U.S. population is an important element of the upward drift but so is expansion of transfer payment programs. For example, the Medicare prescription drug benefit (Medicare Part D) was initiated in 2006. In 2010 the Affordable Care Act (ACA), more commonly called Obamacare, expanded public health care assistance. Climbing transfer payments isn't just a recent development as various programs have been added over

the last eight decades.

Table 2 shows transfer payments as a percent of personal income for each decade since the 1930s. Transfer payments accounted for less than 1.5 percent of personal income in Minnesota and the U.S. before the Great Depression. New Deal programs established during the Great Depression more than doubled the percent of personal income received via transfer payments during the 1930s. Transfer payments' share of personal income gradually increased in the 40s, 50s and 60s, before expanding significantly during the 70s and has continued to steadily climb since.

Table 2. Transfer Payments as a Percent of Personal Income*

Year	U.S.	Minnesota
1930	3.3	3.9
1940	3.7	4.2
1950	5.1	5.5
1960	6.8	7.4
1970	10.8	10.5
1980	12.2	12.0
1990	13.5	11.8
2000	14.5	12.9
2010	17.3	15.9

*Decade average except for 2010 which is annual average from 2010 to 2017.

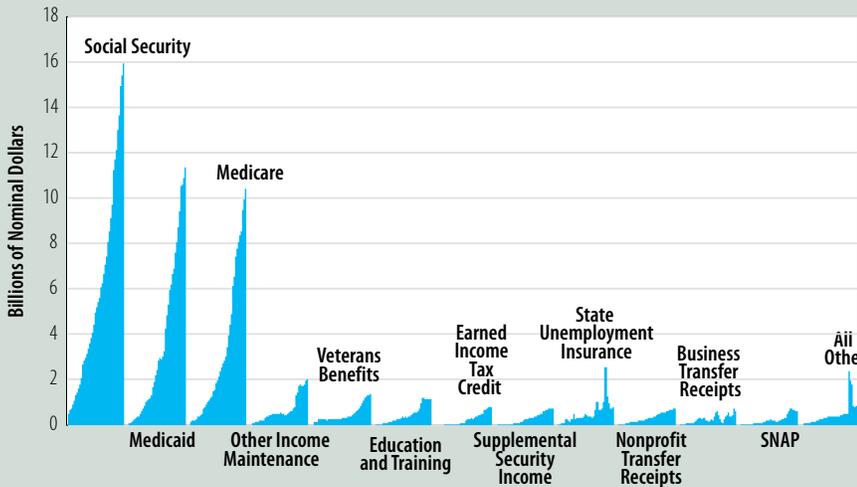
Source: Bureau of Economic Analysis (BEA) - <https://apps.bea.gov/itable/itable.cfm?ReqID=70&step=1>.

Minnesota Personal Current Transfer Payments, 2017

BEA Categories		Payment Descriptions
Personal current transfer receipts	\$Billions 47.4	
Current transfer receipts of individuals from governments	46.0	
Retirement and disability insurance benefits	16.4	
Social Security benefits	16.0	Monthly benefits received by retired workers and their dependents, disabled workers and their dependents, and survivors.
Excluding Social Security benefits*	0.4	Railroad retirement and disability benefits. Workers' compensation. Temporary disability benefits, black lung benefits and benefits from the Pension Benefit Guaranty Corporation.
Medical benefits	21.9	
Medicare benefits	10.4	Federal government payments made directly or through intermediaries to vendors for care provided to individuals under the Medicare program. Medicare Prescription Drug Plan (Part D) payments are also included.
Public assistance medical care benefits	11.4	Payments made directly or through intermediaries to vendors for care provided to low-income individuals or disabled under the federally assisted state-administered Medicaid program, and the Title XIX Medicaid expansion portion of the Children's Health Insurance Program (CHIP).
Military medical insurance benefits*	0.1	Vendor payments made under the TRICARE Management program for medical care of dependents of active duty military personnel and of retired military personnel and their dependents at nonmilitary medical facilities.
Income maintenance benefits	4.2	
Supplemental Security Income (SSI) benefits	0.8	Benefits received by low-income persons who are aged, blind, or disabled from both the federal and state governments.
Earned Income Tax Credit (EITC)	0.8	Refundable federal income tax credit for low-income workers, mainly those who have minor children.
Supplemental Nutrition Assistance Program (SNAP)	0.6	Benefits issued to qualifying low-income households to supplement their ability to purchase food.
Other income maintenance benefits	2.0	Benefits received by low-income families under the Temporary Assistance to Needy Families (TANF) program. Other benefits included here are foster care adoption assistance, child tax credit, energy assistance, and the value of vouchers issued under Special Supplemental Nutrition for Women, Infants, and Children (WIC) program.
Unemployment insurance compensation	0.8	
State unemployment insurance compensation	0.7	Compensation received by individuals under state-administered unemployment insurance (UI) programs.
Excluding state unemployment insurance compensation*	0.0	Other unemployment compensation payments to unemployed federal workers, unemployed railroad workers, and unemployed veterans who have recently separated from military service. Also trade adjustment assistance for workers who are unemployed due to international trade arrangements.
Veterans benefits	1.4	
		Veterans pension and disability benefits. Veterans readjustment benefits and veterans life insurance benefits.
Education and training assistance	1.1	
		Largely federal fellowship payments (National Science Foundation fellowships), interest subsidy on higher education loans, Pell grants, Job Corps payments, education exchange payments and state education assistance payments.
Other transfer receipts of individuals from governments*	0.3	
		Long list of programs including compensation for survivors of public safety officer killed on duty, compensation of victims of crime, Alaska Permanent Fund benefits, disaster relief benefits, and Bureau of Indian Affairs benefits.
Current transfer receipts of nonprofit institutions	0.7	
		Mainly receipts of private education institutions on behalf of the recipients of federal fellowships, Pell grants, and other education and training programs. State and local government payments to private nonprofit institutions that provide job training under a work-study program. Donation by corporate business to nonprofit institutions serving households.
Current transfer receipts of individuals from businesses	0.6	
		Mostly consist of receipts from insurance companies (commercial automobile liability, medical malpractice, and net insurance settlements) to individuals.

*Four of the smaller BEA categories of transfer payments have been combined in the All Other category used in Figure 2.

**Figure 2. Minnesota Personal Transfer Payments
1969 - 2017**



Source: Bureau of Economic Analysis (BEA) - <https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1>

Transfer payments are mainly funded through federal spending, but state and local government spending on transfer payment programs is also included. For example, unemployment insurance benefits are a federal-state cooperative program with some states boosting unemployment checks above federally mandated levels. Many other federally run programs are augmented in some states through state spending that provides higher benefits than in other states. Annual Permanent Fund checks mailed out yearly to Alaskans are even included in the BEA's Other Transfer Receipts of Individuals from Governments category.



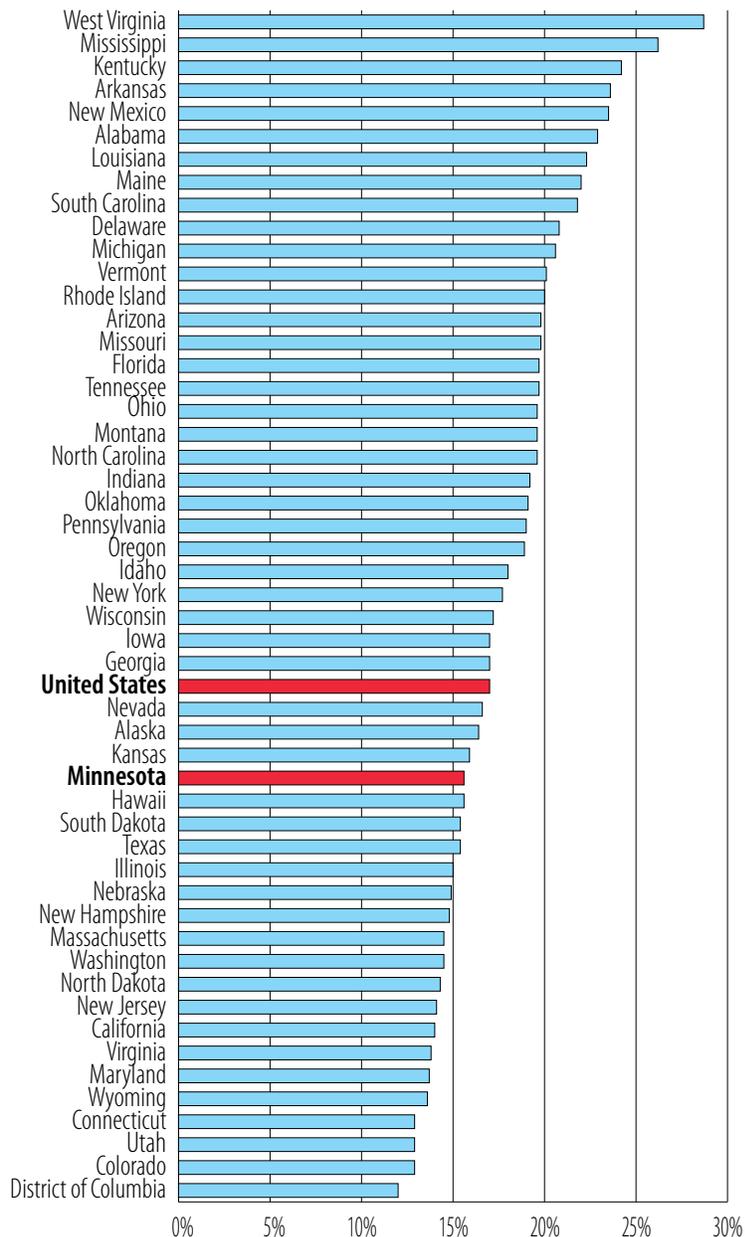
Figure 2 shows the increase in transfer payments by type. Social Security payments exceeded combined Medicaid and Medicare payments in Minnesota until 2000. The increasing cost of health care combined with the increasing age of Minnesotans and expansion of low-income health care programs has pushed combined Medicaid and Medicare payments to \$21.4 billion in 2017 in Minnesota. That is roughly 36 percent more than the \$16.0 billion in Social Security benefits collected by Minnesotans in 2017. Only three states – South Dakota, Idaho and Wyoming – received

more Social Security payments than combined Medicaid and Medicare payments in 2017.

Figure 2 provides a visual check on the size of various transfer payments. For example, Minnesota’s Unemployment Insurance Program paid out \$700 million in 2017, which was only five percent of the \$16 billion Minnesotans collected in Social Security that year. The \$700 million in unemployment checks was equivalent to roughly 0.4 percent of wages and salaries and self-employed income (earnings from work) earned by Minnesotans in 2017. Unemployment insurance benefits topped \$2.5 billion in 2009 during the worst of the last recession, the equivalent of 1.8 percent of the work-related earnings in 2009.

Minnesota has received a smaller share of its personal income from transfer payments than the U.S. continuously since 1984 as shown in Figure 1. The state reached its biggest gap relative to the nation in percent of personal income arising from transfer payments in 1996. The state ranked 19th lowest in 2017 when it comes to personal transfer payments as a percent of personal income (Figure 3). West Virginia with its high rate of poverty and one of the oldest populations topped the list as the most

Figure 3. Personal Transfer Payments as a Percent of Total Personal Income, 2017



Source: Bureau of Economic Analysis (BEA) - <https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1>

transfer payment-dependent state. Other states with high transfer payments dependency have similar characteristics when it comes to poverty, age structure, low wages, low labor force participation rates and relatively high unemployment rates.

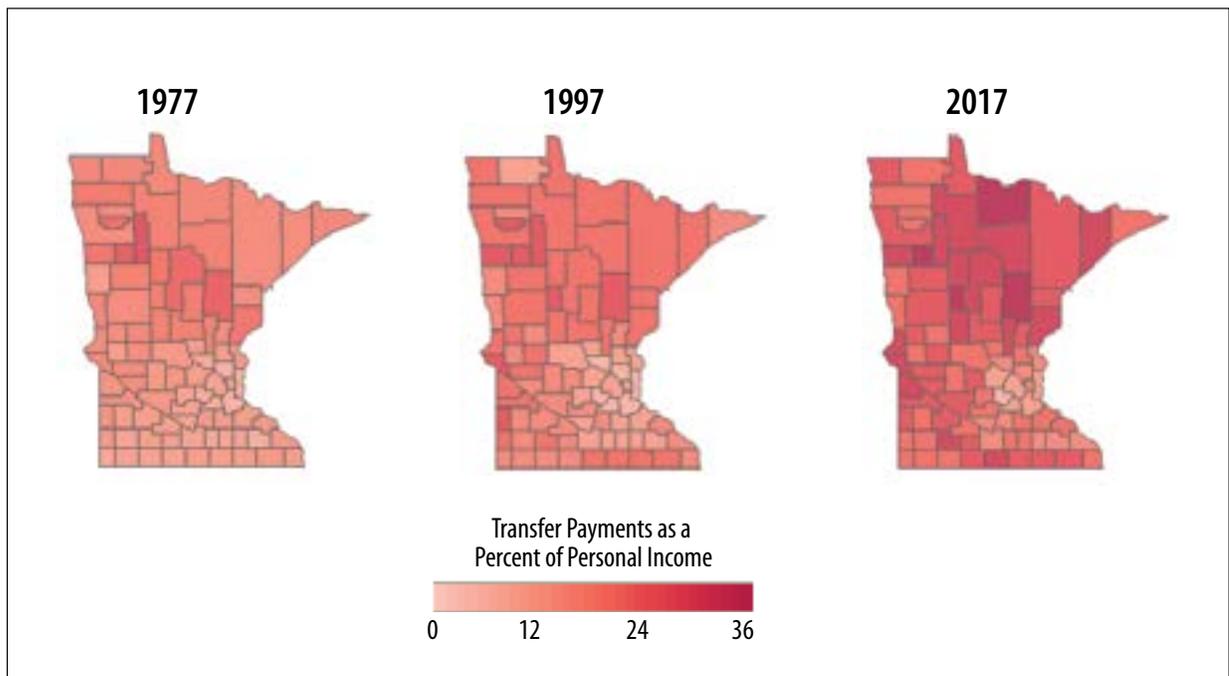
While transfer payments made up 15.6 percent of personal income in Minnesota in 2017, the percent across counties ranges from 7.8 percent in Carver County to 35.2 percent in Mahnommen County. Only nine counties depend on transfer payments for a lower share of their personal income than the

state average. All but one of the nine counties – Olmsted County, home to Rochester – are in the Minneapolis-St. Paul MSA. Twenty percent or more of personal income arose from transfer payments in 55 of the 87 counties in Minnesota. The share of personal income accounted for by transfer payments was 13.9 percent in the metropolitan portion (27 counties) of the state and 23.6 percent in the nonmetropolitan portion (60 counties).

Figure 4 shows the dependency of counties on transfer payments through the last four decades.

While transfer payments as a percent of personal income have nearly doubled statewide since 1969, they have more than doubled as a percent of personal income in 62 Minnesota counties. The growth in transfer payments across counties can be explained by many of the same variables that determine transfer payment variation across states: poverty rates, age structure, low wages, low labor force participation rates, stagnate job growth, and high unemployment rates. Higher rates of transfer payments, by design, are mostly symptoms of sluggish local economies, not causes.

Figure 4. Transfer Payments by County



In some cases, increasing transfer payment dependency may actually be a sign of strength. That may be the case in counties where retirees are moving to. Seven of the top 15 counties in terms of increasing reliance on Social Security income between 2007 and 2017 are prime Minnesota lake counties. Increasing Social Security payments in these counties (Cass, Cook, Crow Wing, Itasca, Kanabec, Koochiching, and Lake) is probably the result of net immigration by retirees in addition to the aging of native county residents. Getting to know the importance of transfer payments and ongoing changes in the mix of transfer payments in local areas is just another tool in understanding local economies.¹ 



¹A Tableau visualization of all 16 transfer payments categories data published by the BEA for 1969 through 2017 for Minnesota and all 87 counties is available at <https://public.tableau.com/profile/magda.olson#!/vizhome/CountyTransferPaymentsinMinnesota1969-2017/Sheet1?publish=yes>. Transfer payment data is displayed on a per capita, percent of state transfer payments, percent of county transfer payments, and percent of county personal income basis as well as the actual detailed annual transfer payment amounts.

Bachelor's Degree and Career Destination

A new tool matches educational programs to occupations.

The new Bachelor's Degree and Career Destination (BDCD) tool maps post-secondary fields of study to occupational outcomes to contribute to our understanding of post-secondary education outcomes.¹ Funded through a 2015 State Longitudinal Data Systems (SLDS) grant from the U.S. Department of Education, users may access the tool at mn.gov/deed/bdcd.

The tool uses empirically-based evidence to map individuals' undergraduate fields of study to their actual job. Based on Minnesota data from the American Community Survey, the tool is designed for anyone interested in exploring patterns of occupational outcomes by undergraduate field of study.

The BDCD is a visual display of fields of study at the bachelor's level and labor market outcomes for Minnesota residents. Specifically, the BDCD provides information on occupations, employment and unemployment, labor force participation, and wage and salary income.

The data tool comprises a two-way display that answers two questions:

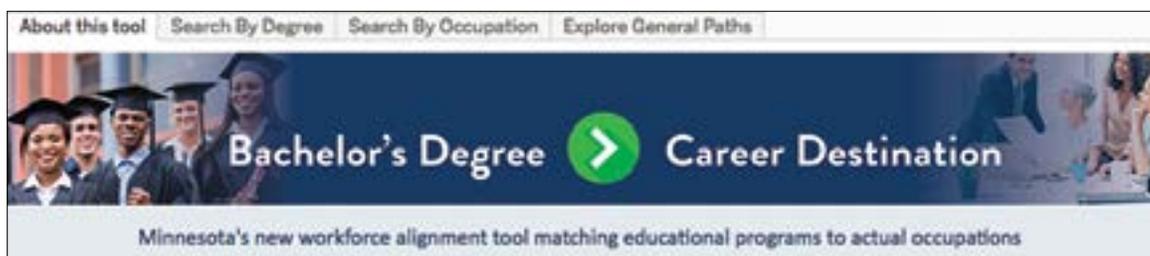
What occupations do undergraduate degree holders enter?

The data tool allows users to search and select fields of study from a menu of general or detailed fields of study. After selecting a field, the tool will show the percent frequency

distribution of occupations held by undergraduate degree holders who majored in that field. The data are available for currently employed working-age adults, 25 to 64 years old, or it can be further broken down by ten-year age intervals (25 to 34; 35 to 44; 45 to 54; 55 to 64).

What majors do incumbents of occupations come from?

The BDCD tool allows users to search and select general or detailed occupations from a menu. Upon selecting an occupation, the tool will show the sorted percent frequency distribution of incumbents by field of degree. The data are available for working-age adults in ten-year age intervals.



¹The DEED tool was funded by a 2015 State Longitudinal Data Systems (SLDS) grant from the U.S. Department of Education.

Why Do We Need This Tool?

One of the critical challenges of the labor market is to align the supply and demand of skilled workers to ensure that workers can find jobs and that vacant jobs are quickly and efficiently filled. Reliable data help students make informed choices about their fields of study and future career paths.

Past research looking at the link between supply and demand has been based in theoretical approaches, for example where we expect graduates to be employed, rather than empirical evidence. This data tool summarizes self-reported occupational outcomes of Minnesotans with a bachelor's degree.

The tool shows the progression of occupational pathways and

associated median earnings and other labor force outcomes by age. The underlying premise for the age breakdown is that occupational choices are not necessarily set for life and depending on the field of study, occupational pathways may change over time.

The data tool shows the percent frequency distribution by occupation for each field of study as well as the distribution of fields of study by occupation. This is a good way to understand the relative importance and likelihood of fitting into an occupation with a specific major, and which college majors most occupational incumbents come from.

For example, an undergraduate student interested in becoming a management analyst will find that about 18 percent of management analysts hail from

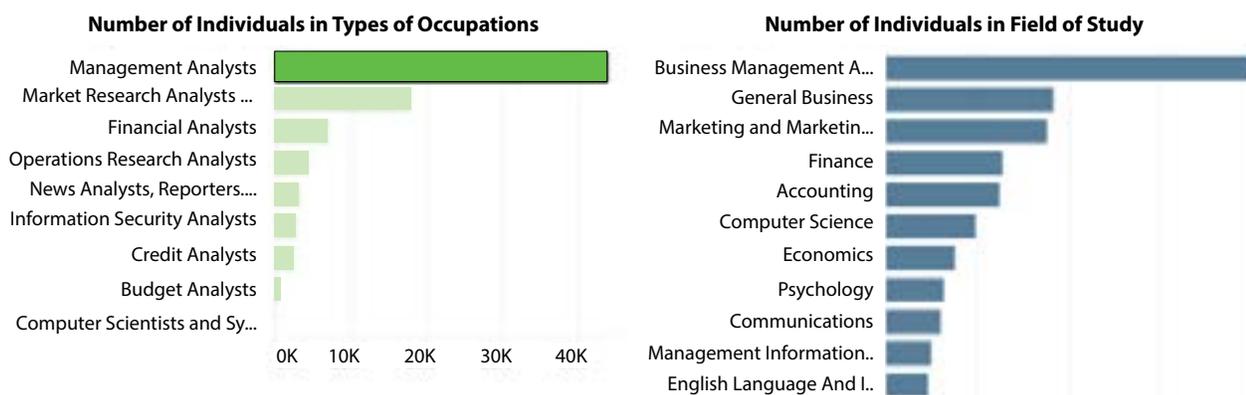
the business management and administration field. However, 28 percent are from the next four most common fields of study: general business, marketing, finance and accounting, while computer science, economics, psychology, communications, management information and statistics round out the top ten fields of study. In this and many other occupations, students representing a variety of majors still have a good chance of landing a job in their chosen occupations.

Below is an example of the information the BDCD tool offers.

How to Use the BDCD Tool

Shannon, a fictitious high school senior for purposes of this article, is exploring college majors. She needs information

Minnesotans who work in the following occupations have a bachelor's degree in these detailed fields of study.





on outcomes of various college majors. Her choices are based on her interests as well as prospective employment outcomes of majoring in a specific discipline. She has heard that a business major is one of the most lucrative. Shannon uses the BDCD to explore business major outcomes to help inform her decision-making.

The BDCD gives her the following information: The first encouraging news for Shannon is that business is the most popular general field of study. Twenty-six percent of bachelor's degree holders in Minnesota majored in business, making this the most frequently selected college major. Within business as a general field of study, there are many specific tracks. The most popular track (31.3 percent of business majors) is business management and administration.

Also popular are general business (19.2 percent), accounting (17.5 percent), marketing and market research (13.6 percent), finance (8.8 percent), management information and statistics (2.5 percent), and human resources and personnel management (1.8 percent).

Shannon further learns that bachelor degree holders with a business major fit into a variety of management, supervisory, and related occupations, but the most popular occupation is accountants and auditors, with 11 percent of business majors choosing this occupation. This is followed by miscellaneous managers (6.4 percent), sales representatives (3.9 percent), financial managers, first-line supervisors of retail sales workers, and management analysts (2.9 percent).

Shannon notices that specific business tracks lead to somewhat different occupational and employment outcomes. For example, 43 percent of accounting majors work specifically as accountants and auditors compared to finance majors who work in more diverse occupations, including accountants and auditors (9.3 percent), financial managers (7.1 percent) and chief executives and legislators (6.1 percent). Accounting majors report 1.0 percent unemployment, but a business economics major faces a 9.0 percent chance of unemployment.

Median annual earnings also differ by choice of field of study. An actuarial science major will earn \$40,000; a hospitality management major will earn \$45,000; but accounting majors will earn \$70,000 on average. Those who tracked into management information systems and statistics will make \$97,000 on average.

How likely are business majors to earn an advanced degree? Using the BDCD tool, Shannon learns that a high proportion of business majors do not earn advanced degrees, although this varies by track. Eighteen percent of accounting majors get an advanced degree, while only 13 percent of actuarial science majors get an advanced degree. ■

College: Yes or No?

Recent economic expansion creates more opportunities for high school graduates.

As college tuition continues to rise,¹ some high school graduates might wonder if college is worth the time and money, especially in a tight labor market where jobs are plentiful. In fact, a growing share of Minnesota high school graduates enter the workforce after graduation and find some success. While many students who forgo college face low pay and little upward mobility, many regions and industries across the state provide high school graduates with wages that meet the cost of living. This article examines statewide and regional trends for Minnesota high school graduates who did not go to college but instead entered the workforce between 2009 and 2016.

Statewide Trends

In Minnesota, the Statewide Longitudinal Education Data System, or SLEDS, helps us identify the pathways of students from school to the workforce including post-secondary education. In 2016, 69 percent of high school graduates

enrolled in college in the fall after graduation, 23 percent of Minnesota high school graduates did not go on to college, but instead found employment during the year after graduation, and eight percent had unknown outcomes.² Many of those who enrolled in college were also working, but for the purpose of this analysis employed graduates

means those high school graduates who went into the workforce and did not enroll in college.

For the 23 percent of high school graduates who found work instead of attending college, the top industries of employment are shown in Table 1.

Table 1. Top Industries of Employment for High School Graduates, Class of 2016

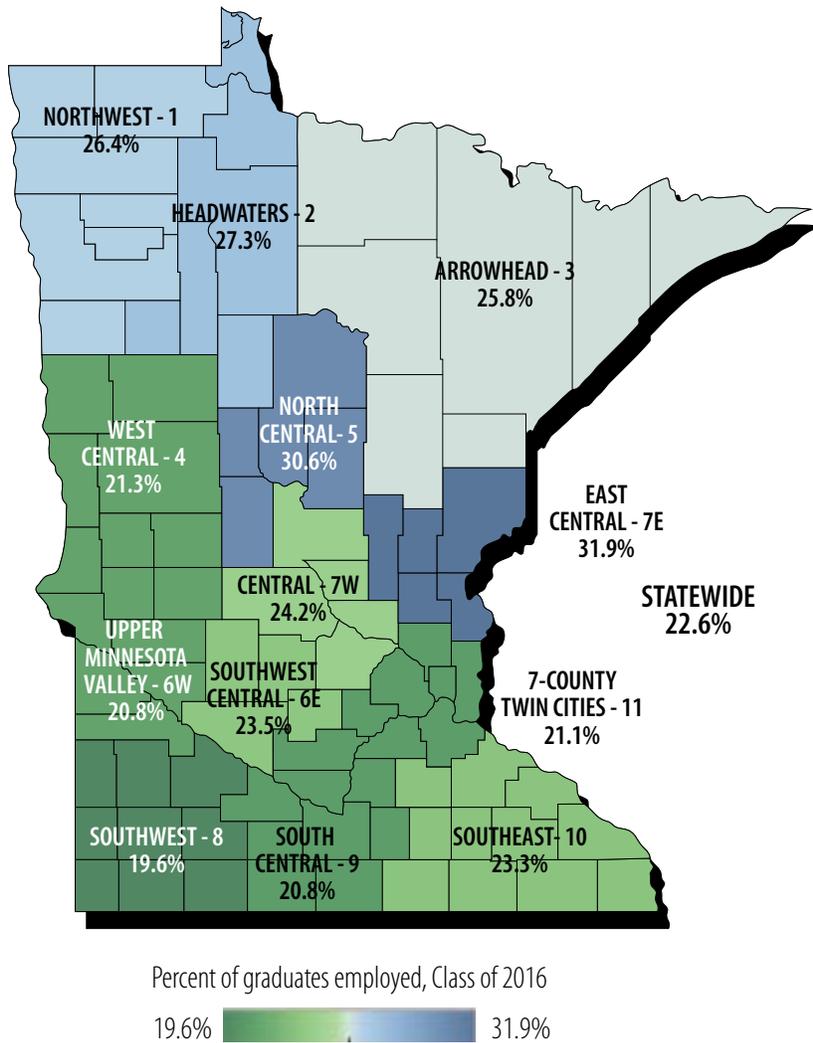
Industry	Employed, as a percent of total
Trade, Transportation and Utilities	31%
Leisure and Hospitality	25%
Education and Health Care and Social Assistance	13%
Professional and Business Services	11%
Construction	6%
Manufacturing	6%
Other Services	4%
Financial Activities	2%
Public Administration	2%
Information	1%
Natural Resources and Mining	1%

Source: Statewide Longitudinal Education Data System

¹ Average undergraduate fees and tuition at Minnesota public and private four-year institutions increased 37 and 48 percent respectively from 2007-2016. www.ohe.state.mn.us/mPg.cfm?pageID=650

² Unknown outcomes include graduates not found to be enrolled in college or employed in Minnesota. This could be students who are in school or working outside of Minnesota, are unemployed, or are not seeking work.

Employed High School Graduates as a Percent of Total, Class of 2016



Percentage of Minnesota high school graduates employed after graduation, by Economic Development Regions, class of 2016, any hours. Employed graduates are those found to be employed during one or more of the four quarters after graduation, but not enrolled in college.

Source: Minnesota Statewide Longitudinal Education Data System and author's calculations.

Regional Trends

Displaying the data by Economic Development Region (EDR) reveals that, on average, the share of high school graduates entering the workforce rather than enrolling in college is highest in the northern half of the state (see map), but it has been expanding in almost every part of the state. Between 2009 and 2016, the EDRs that experienced the most growth in high school graduates entering the workforce are spread out across the state, with Northwest (EDR 1) coming in first at roughly 34 percent, followed by Southwest Central (EDR 6E) at just under 28 percent. Apart from Headwaters (EDR 2), every region experienced an expansion in the share of graduates entering the workforce during this time period.

Labor Market Heats Up

Why did more high school graduates enter the workforce over this period? The trend can be mostly explained by a decline in unknown outcomes, rather than a decline in college enrollment. This may mean that more high school graduates who are not enrolled in college are finding employment, and finding it in Minnesota. This stronger employment outcome is likely a result of the tight labor market, with the unemployment rate at

an 18-year low, and the number of job vacancies, at a series high (since 2001).

Looking at job vacancies, the share requiring a high school diploma/GED or less, increased from 59 to 64 percent over the seven-year period. Not only are there more job openings available to high school graduates, but there are also more full-time positions open. The share of *full-time vacancies* requiring a high school diploma/GED or less increased from 49 to 57 percent over the seven-year period.³ Clearly high school graduates have had increasing opportunities in the labor market over this period.

But My Parents Say I Should Go to College

Overall, any type of post-secondary training is beneficial for employment and wage prospects. Reports vary, but many show that the lifetime earnings of a college graduate are about twice that of people with a high school diploma.⁴ Importantly, *full-time employment* is harder to secure without education or training beyond high school. Completers of any type of post-secondary award are roughly twice as likely to find full-time employment as high school graduates.⁵

However, it is also true that a growing number of college graduates face significant debt, with some working in occupations unrelated to their course of study or below their qualifications. Total student loan debt surpassed \$1.5 trillion in first quarter 2018.⁶ For high school graduates unsure of where and what they want to study, entering the workforce may be the most economically viable option.

While less than a quarter of high school graduates find full-time employment⁷ in the year after graduation, this share has been trending upward. In 2009, 7



³This trend has continued into 2017/2018, as the number of job vacancies increased to 113,774 in fourth quarter 2017, with 68 percent of them requiring a HS diploma/GED or less. It should be noted that while some positions only require a high school diploma, they may still require relevant work experience.

⁴Lifetime Earnings by Degree Type. The Hamilton Project, 2017. www.hamiltonproject.org/charts/lifetime_earnings_by_degree_type.

⁵Graduate Employment Outcomes, Minnesota DEED. Data used in the comparison are from 2016 for high school graduates and 2014 for post-secondary completers (the earliest year on record). Until recently, this difference was much greater.

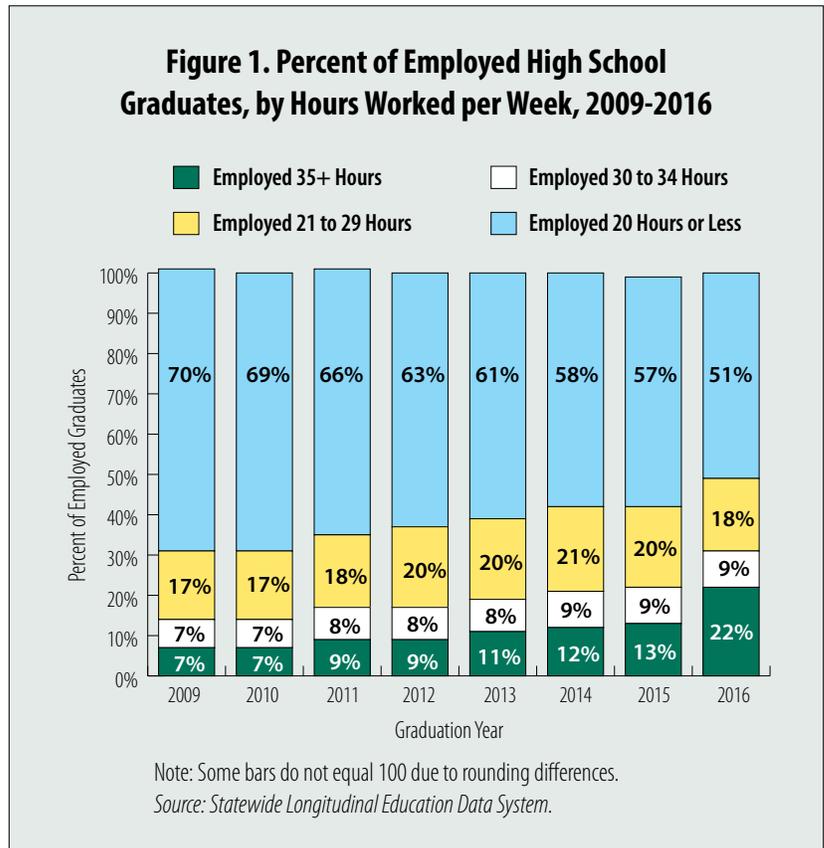
⁶The Federal Reserve System and College Ave Student Loans survey, on CNBC

percent of high school graduates worked full-time compared to 22 percent in 2016 (Figure 1). From 2015 to 2016 alone, the percent of employed graduates working full-time increased from 13 to 22 percent. Additionally, for *full-time employees*, the average number of weekly hours worked increased from 40 to 44⁸ during the same time period.

Wage prospects have been improving as well. Statewide, high school graduates' average hourly wages increased 25 percent from \$10.00 in 2009 to \$12.50 in 2016, an average annual increase of 3.6 percent, outpacing the rate of inflation over the same time period.⁹ High school graduates experienced increased purchasing power, meaning their paychecks went further at the grocery store and the pump.

Conclusion

Thanks to a tight labor market, high school graduates who aren't enrolled in college are more likely to find work in Minnesota, work full time and earn a living wage. If the strong labor market



continues, we should continue to see wages and the demand for full-time workers increase. Despite these trends, obtaining education or training beyond high school is a good defense against market downturns. ■

⁷Full-time employment is defined by SLEDS as working in every quarter of the year immediately following graduation, and working at least 1,820 hours over the four quarters or, on average, 35 hours per week.

⁸SLEDS.

⁹Average annual inflation rate (CPI) was 1.57 percent over the seven-year stretch, 2009-2016, Minneapolis Federal Reserve Bank.

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MINNESOTA ECONOMIC TRENDS

MINNESOTA ECONOMIC TRENDS is published by the Labor Market Information (LMI) Office of the Minnesota Department of Employment and Economic Development (DEED).

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